SECTION I

1983 UCLA SYMPOSIA APPLICATION FORM

PLEASE RETURN THE ORIGINAL AND TWO (2) PHOTOCOPIES OF *SECTION I*, ALONG WITH THE ORIGINAL OF *SECTION II*.

REFER TO THE APPLICATION INSTRUCTIONS BEFORE COMPLETING THIS FORM. (Page 13 and 14).

CONFERENCE CHOICE	APPLICATION DEADLINE
☐ 1. Molecular Biology of Host-Parasite Interactions	November 1
☐ 2. Recent Advances in Bone Marrow Transplantation	November 1
☐ 3. Gene Expression	November 1
☒ 4. Normal and Neoplastic Hematopoiesis	November 15
☐ 5. Mechanisms of DNA Replication and Recombination	November 15
6. The Repair of Genomic Damage in Living Tissue	November 15
☐ Option #1: April 7–April 15	
☐ Option #2: April 10–April 15	
☐ 7. Plant Molecular Biology	November 15
☐ 8. Biosynthesis of the Photosynthetic Apparatus: Molecular Biology, Development and Regulation	November 15
☐ 9. Protein Transport and Secretion	November 15

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OFFICE USE ONLY

PLEASE COMPLETE:

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Position

☐ Professor ☐ Postdoctorate (Please name advisor: _____)

☐ Graduate Student (Please name advisor: _____) ☐ Research Scientist

☒ Other (Please specify: Assistant Professor)

ABSTRACT FORM OR STATEMENT OF RESEARCH INTERESTS. Abstracts must be prepared in accord with the instructions on page 14.

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HEMOGLOBIN PRODUCTION ON STIMULATION OF K562 HUMAN PLURIPOTENT LEUKEMIA CELLS, A.E. Felice, S.M. Mayson, A.L. Reese and T.H.J. Huisman, Hemoglobin Research Laboratory, V.A. Medical Center, Augusta, GA and Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA, U.S.A.

Programs pertaining to normal erythropoiesis, such as Hb synthesis, could be organized abnormally in the K562 blasts and perhaps also in other leukemic blast cells. Thus, an evaluation of the abnormal regulatory properties of these cell types may contribute to understand various aspects of the normal regulation of erythrocytic differentiation and Hb synthesis.

K562 cells produce low levels of hemoglobin spontaneously. After the addition of hemin, Na butyrate or dimethyl sulfoxide either the MCH, or the proportion of B^+ cells, or both increase. Pre-incubation with L-ethionine, or co-culture with hydroxyurea lead to increased, hemin stimulated, hemoglobinization. Such interactions between stimulating agents could influence the types of Hb chains synthesized. With hemin alone, these are the embryonic ε and ζ chains, the α chains, and a large though variable excess of $^{G}\gamma$, $^{A}\gamma^{I}$ and $^{A}\gamma^{T}$ chains. A β or δ chain production has not been documented thus far. Although the production of γ chains varies between experiments, the proportion of $^{G}\gamma/[^{A}\gamma^{I} + ^{A}\gamma^{T}]$ chains remains relatively constant at levels often found in the peripheral blood erythrocytes of patients with leukemia. The possible production of β chains is evaluated among K562 cells frozen at much earlier passages. (Samples through the courtesy of Dr. Lozzio.)

Further studies utilize cloned K562 cells which have been adapted for growth in a serum-free medium. At low initial cell densities, hemin appears to have mitogenic properties in this system. Neither erythropoietin nor Prostaglandin E_2 can substitute for hemin.

Please indicate the first and second (1,2) choices of workshops under which your abstract may be programmed.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19

March 29 or April 1